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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032.667	10/24/2001	Dave Hylands	13270US01	7248
23446	7590	12/14/2004	EXAMINER	
MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			HO, THE T	
			ART UNIT	PAPER NUMBER
			2126	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,667

Applicant(s)

HYLANDS ET AL.

Examiner

The Thanh Ho

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the application filed 10/24/2001.
2. Claims 1-28 have been examined and are pending in the application.

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: the serial number of the related patent application needs to be updated (line 1 second paragraph page 1). Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The following terms lack antecedent basis:

(i) the fault function (line 5 claim 22). Correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Arts (APA) in view of Nelson U.S Patent No. 6,209,061.

As to claim 1, APA teaches a method for generating program overlays from a sequence of program code (overlays of a program, paragraph 12 page 3), each overlay having a set of code and related data contained therein (code/data segments, paragraph 14 page 4), the overlays being transferred from a storage area to a receiving area for processing (overlays being transfers to the memory 120, Fig. 4, paragraph 15 page 4), the method comprising the steps of:

breaking the sequence of program code into a set of segments each contains a certain amount of related code for processing (overlays of a program wherein each overlay segment contains both code/data, paragraph 12 page 3, paragraph 14 page 4);

running a code segment in the set through a linker device (linker technology to create code and data segments, paragraph 16 page 4);

extracting the code segment and related data segment produced by the linker device (code overplays 102-106 and data overplays 108-112, Fig. 1), with each associated pair of code and data segments representing an overlay (code/data overplays A, B and C, Fig. 1);

checking if more segments exist in the set (the process of using linker technology to create code and data segments, paragraph 16 page 4). APA does not explicitly teach an overlay manager and referencing the overplays.

Nelson teaches a system of using overplay when executing a program (...program 26, during execution, accesses a memory address contained within one of the memory regions within overlay memory 23..., lines 20-22 column 3) wherein the overlays being transferred via an overlay manager from a storage area to a receiving area for processing (...when program 26, during execution, accesses a memory address contained within one of the memory regions within overlay memory 23, overlay memory controller 24 responds to that address..., lines 20-30 column 3; lines 11-52 column 4); concatenating the overlays into a file which can be referenced by the overlay manager (...overlay memory 23 can be segmented into a number of memory regions, with each region defined by a base pointer value that evidences a base address of a

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region of addresses and a length value. A record of each base pointer value is maintained in overlay controller 24. In essence, each base pointer value and an associated length value define a set of storage locations having addresses that are present in main memory 16 but are, for the time being, unused..., lines 10-19 column 3). It would have been obvious to apply the teachings of Nelson to the system of APA because this improves memory performance by providing an overlay memory as disclosed by Nelson (lines 29-47 column 2).

As to claim 2, APA as modified further teaches dividing the code into a common code area, and an overlay code area (code overplays 102-106 and data overplays 108-112, Fig. 1).

As to claim 3, APA as modified further teaches sizing the program code segments so that they will fit within the receiving area (overplays allow program to fit into small memory, paragraph 12 page 3).

As to claim 4, APA as modified further teaches creating stubs being stored in the receiving area for referencing each function in each program code segment (stub in the common area that referencing code and data, paragraph 13 page 3; wrapper functions for a particular overlay, paragraph 15 page 4).

As to claim 5, APA as modified further teaches generating an overlay table to be used in facilitating transfer of the overlays from the storage area to the receiving area, the overlay table being stored in the receiving area (code overlay area 126 and data overlay area 128 of the memory area 120, Fig. 1).

As to claim 6, APA as modified further teaches the storage area includes an external storage means (low-MIPS processing unit, paragraph 11 page 3).

As to claim 7, APA as modified further teaches the storage area includes memory associated with a low-MIPS processing device (low-MIPS processing unit, paragraph 11 page 3).

As to claim 8, APA as modified further teaches the receiving area includes memory associated with a high-MIPS processing device (DSP, paragraph 12 page 3).

As to claim 9, APA as modified further teaches the high-MIPS processing device includes a digital signal processor (DSP, paragraph 12 page 3).

As to claim 10, APA as modified further teaches the information is converted into a form usable by a processor (the use of higher level language, paragraph 10 page 3).

As to claim 11, APA as modified further teaches the form includes a source file of a high-level programming language (the use of higher level language, paragraph 10 page 3).

As to claim 12, it is a method claim of claims 1-4. Therefore, it is rejected for the same reasons as claims 1-4 above.

As to claims 13-18, they are method claims of claims 6-11, respectively. Therefore, they are rejected for the same reasons as claims 6-11 above.

As to claim 19, it is a method claim of claims 1-4. Therefore, it is rejected for the same reasons as claims 1-4 above. Nelson further teaches creating an overlay control file (...by inserting the respective base pointers of the subregions, and the associated

length values which define, respectively, the subregion extents, into overlay memory controller 24, addresses issued by CPU 12 onto bus 14 which fall within a subregion, are immediately recognized by overlay memory controller 24..., lines 5-10 column 4) for each overlay describing each pair of code and data associated with each overlay.

As to claim 20, APA as modified further teaches creating a copy of the common image whereby the entry point symbols are removed from the particular overlay to be built and linking together an image for a particular overlay to form an overlay image file (the combination of A-C overlays, Fig. 1); extracting the code and data sections from the overlay image file (separation of code and data overlays in each of A-C, Fig. 1).

As to claim 21, APA as modified further teaches generating a wrapper file reads the overlay control file and generates wrapper functions for each function described therein (stub in the common area that referencing code and data, paragraph 13 page 3; wrapper functions for a particular overlay, paragraph 15 page 4).

As to claim 22, APA as modified further teaches the fault function causes the overlay code and data sections to be paged from the storage area to the receiving area (overlays being transfers to the memory 120, Fig. 4, paragraph 15 page 4). Nelson further teaches an overlay descriptor resides in common data and contains information about the overlay (overlay controller, line 13 column 3); the wrapper function is the entry point to the overlay function (the use of base pointer value, lines 12-19 column 3). Note the discussion of claim 1 above for the reasons of combining the references.

As to claims 23-28, they are method claims of claims 6-11, respectively. Therefore, they are rejected for the same reasons as claims 6-11 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to The Thanh Ho whose telephone number is (571) 272-3762. A voice mail service is also available for this number. The examiner can normally be reached on Monday – Friday, 8:30 am – 5:00 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Any response to this action should be mailed to:

Commissioner for Patents
P.O Box 1450
Alexandria, VA 22313-1450

Or fax to:

- AFTER-FINAL faxes must be signed and sent to (703) 872 - 9306.
- OFFICAL faxes must be signed and sent to (703) 872 - 9306.
- NON OFFICAL faxes should not be signed, please send to (571) 273 – 3762

TTH
December 6, 2004


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